

REMARKS

Claims 1-13 were pending in the present application. Claim 13 has been withdrawn from consideration. By virtue of this response, claim 1 has been amended. Accordingly, claims 1-12 are currently under consideration. Amendment and cancellation of certain of the claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented.

Amendment to Claim 1

Claim 1 has been amended to recite that a plurality of multilayered structures are formed directly on the silicon substrate” The amendment to claim 1 is fully supported by the original specification. Therefore, no new matter is added. For example, support for this amendment can be found at page 10, lines 1-10 and Figures 1 and 3 of the present specification.

Rejections under 35 U.S.C. §103(a)

The office has rejected claims 1 through 12 as allegedly being unpatentable over Thibeault (U.S. patent no. 6,410,942) in combination with, for particular ones of the claims, one or more other references. With regard to Thibeault, one contention of the Examiner is that Thibeault shows “a semiconductor light emitting device having substrate 20, 28, on which is formed a plurality of column-shaped multilayered structures 18, 14, 16.” As discussed in the previous section, this feature has been amended to recite the multilayered structures formed directly on the silicon substrate.” It is respectfully submitted that Thibeault fails to disclose or suggest this feature.

Rather, Thibeault is directed to micro-LED’s, which have an enhanced light emission. See, for example, column 5, line 44. The Thibeault reference discloses a micro-LED that includes a first spreader layer 20. The first spreader layer is conductive, and current applied to the first spreader layer spreads into each micro-LED’s bottom layer. See, for example, column 3, lines 62-63.

Turning now to Applicant's amended claim 1, this claim recites in part, again as discussed above, that the multilayered structures are formed directly on the substrate. While Thibeault recognizes that the substrate itself may be the first spreader layer 20, this is so only if "the substrate itself is conductive." See, for example, column 6, lines 15-17. In amended claim 1, the substrate is recited to be silicon. Therefore, the disclosure of Thibeault that the substrate itself may be the first spreader layer 20 is irrelevant for the purpose of the rejection.

Furthermore, the Thibeault reference itself teaches away from eliminating the conductive first spreader layer 20. Without the conductive first spreader layer, current would not be spread to each micro-LED's bottom layer 18. See column 5, lines 17-19, which state "The new LED also includes a first spreading layer 20 that spreads current from the n-contact pad 22 to each micro-LED's bottom layer 18."

With respect to Braun, the Examiner alleges that one of ordinary skill in the art would be motivated to form the LED of Thibeault with a silicon substrate. However, as discussed above, this combination would still not lead to the subject matter of claim 1, which recites the multilayered structures are formed "directly" on the substrate.

None of the remaining cited references, cited in rejecting claims 4 and 7 (Koide) and claims 4 and 6 (Yamazaki and Geng) disclose this feature.

Therefore, claim 1 is patentable over the cited references. Since claims 2-12 depend from claim 1, these claims are patentable over the cited references for at least the reasons that claim 1 is patentable over the cited references.

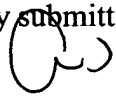
CONCLUSION

In view of the above, each of the presently pending claims under consideration in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 299002053700. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

By 

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